

Jota Alfa

Section 1. Identification

GHS product identifier : Jota Alfa
Other means of identification : Not available.
Product code : 21680
Product description : Preservative.
Product type : Liquid.

[Relevant identified uses of the substance or mixture and uses advised against](#)

Identified uses

Use in coatings - Professional use

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Section 2. Hazards identification

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN CORROSION/IRRITATION - Category 1
 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 SKIN SENSITISATION - Category 1A
 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

[GHS label elements](#)

Hazard pictograms



Signal word : Danger.

Hazard statements : H302 + H332 - Harmful if swallowed or if inhaled.
 H314 - Causes severe skin burns and eye damage.
 H317 - May cause an allergic skin reaction.
 H410 - Very toxic to aquatic life with long lasting effects.

[Precautionary statements](#)

Prevention : P280 - Wear protective gloves, protective clothing and eye or face protection.
 P273 - Avoid release to the environment.
 P261 - Avoid breathing vapour.
 P270 - Do not eat, drink or smoke when using this product.

Section 2. Hazards identification

- Response** : P391 - Collect spillage.
 P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.
 P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
 P363 - Wash contaminated clothing before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

CAS number/other identifiers

- CAS number** : Not applicable.
- EC number** : Mixture.
- Product code** : 21680

Ingredient name	%	CAS number
2-(2-butoxyethoxy)ethanol	≥75 - ≤90	112-34-5
terbutryn	≤10	886-50-0
2-octyl-2h-isothiazol-3-one (OIT)	≤6.2	26530-20-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Section 5. Firefighting measures

- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

- Precautions for safe handling** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2-(2-butoxyethoxy)ethanol	ACGIH TLV (United States, 1/2022). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Section 8. Exposure controls/personal protection

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Wear suitable gloves tested to ISO 374-1:2016.

Recommended, gloves(breakthrough time) > 8 hours: neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), Viton® (> 0.7 mm), nitrile rubber (> 0.4 mm)

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Clear.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not applicable.
- Boiling point** : Lowest known value: 225 to 227.6°C (437 to 441.7°F)(2-(2-butoxyethoxy)ethanol).
- Flash point** : Closed cup: 105°C (221°F)
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : 0.003 (2-(2-butoxyethoxy)ethanol) compared with butyl acetate
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : 0.8 - 9.4%
- Vapour pressure** : Highest known value: 0.003 kPa (0.02 mm Hg) (at 20°C) (2-(2-butoxyethoxy) ethanol).
- Vapour density** : Highest known value: 5.6 (Air = 1) (2-(2-butoxyethoxy)ethanol).
- Relative density** : 0.97 g/cm³
- Solubility** : Very slightly soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Lowest known value: 210°C (410°F) (2-(2-butoxyethoxy)ethanol).
- Decomposition temperature** : Not available.
- SADT** : Not available.
- Viscosity** : Kinematic (40°C): >20.5 mm²/s (>20.5 cSt)
- Aerosol product**

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
terbutryn	LC50 Inhalation Dusts and mists	Rat	2.2 mg/l	4 hours
	LD50 Oral	Rat	1470 mg/kg	-
2-octyl-2h-isothiazol-3-one (OIT)	LD50 Dermal	Rabbit	690 mg/kg	-
	LD50 Dermal	Rabbit	690 mg/kg	-
	LD50 Oral	Rat	550 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-(2-butoxyethoxy)ethanol	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
terbutryn	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	76 milligrams	-
	Skin - Mild irritant	Rabbit	-	380 milligrams	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
2-octyl-2h-isothiazol-3-one (OIT)	skin	Mammal - species unspecified	Sensitising

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Section 11. Toxicological information

Aspiration hazard

Not available.

Potential acute health effects

Eye contact	: Causes serious eye damage.
Inhalation	: Harmful if inhaled.
Skin contact	: Causes severe burns. May cause an allergic skin reaction.
Ingestion	: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: No specific data.
Ingestion	: Adverse symptoms may include the following: stomach pains
Skin contact	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
Eye contact	: Adverse symptoms may include the following: pain watering redness

Potential chronic health effects

General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	1492.54 mg/kg
Dermal	5183.33 mg/kg
Inhalation (dusts and mists)	4.5 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
terbutryn	Acute EC50 0.0067 mg/l	Algae	72 hours
	Acute EC50 6.4 mg/l	Daphnia	48 hours
	Acute LC50 1.9 mg/l	Fish	96 hours
	Chronic NOEC 0.0005 mg/l	Algae	72 hours
	Chronic NOEC 0.05 mg/l	Daphnia	21 days
	Chronic NOEC 0.073 mg/l	Fish	28 days
2-octyl-2h-isothiazol-3-one (OIT)	Acute EC50 0.084 mg/l	Algae - Scenedesmus subspicatus	72 hours
	Acute EC50 0.32 mg/l	Daphnia	48 hours
	Acute LC50 0.047 mg/l	Fish	96 hours

Section 12. Ecological information

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2-(2-butoxyethoxy)ethanol	-	>60 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-(2-butoxyethoxy)ethanol	-	-	Readily
terbutryn	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-(2-butoxyethoxy)ethanol	1	-	low
terbutryn	3.74	-	low
2-octyl-2h-isothiazol-3-one (OIT)	2.45	-	low

Mobility in soil





Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	UN1760	UN1760	UN1760
UN proper shipping name	Corrosive liquid, n.o.s. (2-octyl-2h-isothiazol-3-one (OIT))	Corrosive liquid, n.o.s. (2-octyl-2h-isothiazol-3-one (OIT)). Marine pollutant (terbutryn)	Corrosive liquid, n.o.s. (2-octyl-2h-isothiazol-3-one (OIT))
Transport hazard class(es)	8 	8  	8 
Packing group	III	III	III
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Section 14. Transport information

Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Additional information	-	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-A, S-B	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Transport in bulk according to IMO instruments : Not available.

ADR / RID : Tunnel restriction code: (E)
Hazard identification number: 80
Special provisions: 274

Section 15. Regulatory information

[Hazardous Substance Act B.E. 2535 \(1992\)](#)

[Type](#)

[Ingredient name](#)

terbutryn

[Type](#)

3

[Authority](#)

Department of
Agriculture

[Conditions](#)

Except the part on
responsibility of
Department of
Industrial Works
For industrial use

terbutryn

3

Department of
Industrial Works

No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

[History](#)

Date of printing : 31.07.2023

Date of issue/Date of revision : 31.07.2023

Date of previous issue : 07.05.2021

Version : 3.06

[Key to abbreviations](#) :

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- UN = United Nations
- LogPow = logarithm of the octanol/water partition coefficient

[References](#) : Not available.

Indicates information that has changed from previously issued version.

Section 16. Other information

[Notice to reader](#)

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.